## Claims

What is claimed is:

1. A vehicle tire/wheel arrangement including a tire, a valve stem, a wheel rim, and a plurality of nut and bolt assemblies, comprising:
   a. a wheel cover that reduces the drag and operating temperatures of the tire/wheel arrangement, wherein the wheel cover includes an exhaust port;
   b. a bridge section located over the exhaust port; and
   c. a pressure sensor arrangement disposed on the bridge section.
2. The tire/wheel arrangement according to claim 1, wherein the wheel cover further comprises a plurality of reflectors.
3. The tire/wheel arrangement according to claim 1, wherein the wheel cover is fastened to the wheel rim by a fastener.
4. The tire/wheel arrangement according to claim 3, wherein the fastener is a wheel clip.
5. The tire/wheel arrangement according to claim 3, wherein the fastener is double-sided adhesive tape.
6. The tire/wheel arrangement according to claim 3, wherein the fastener is a plurality of nuts that may be affixed to the interior of the wheel cover.
7. The tire/wheel arrangement according to claim 3, wherein the fastener comprises a welding of the wheel cover to the wheel rim.
8. The tire/wheel arrangement according to claim 3, wherein the fastener comprises a bolting of the wheel cover to the wheel rim.

9. The tire/wheel arrangement according to claim 1, wherein the wheel cover is defined by an elliptically-shaped dome, wherein airflow drag is diverted by the elliptically-shaped dome.

10. The tire/wheel arrangement according to claim 1, wherein the wheel cover is defined by an outer diameter and a depth.

11. The tire/wheel arrangement according to claim 10, wherein the exhaust port is defined by a diameter that creates a low pressure within the wheel cover.

12. The tire/wheel arrangement according to claim 11, wherein the outer diameter is 22.5 inches, the depth is 6 inches, and the diameter of the exhaust port is 9 inches.

13. The tire/wheel arrangement according to claim 1, wherein the pressure sensor arrangement includes a gauge and a valve arrangement, wherein the valve arrangement includes an intake valve and a valve and hose arrangement connected to the valve stem.

14. The tire/wheel arrangement according to claim 1, wherein a low pressure is created in the wheel cover and a Bernoulli effect causes warm air generated by the vehicle in the area of the tire/wheel arrangement to be evacuated from the wheel cover through the exhaust port.

15. A vehicle tire/wheel arrangement including a tire, a valve stem, a wheel, and a plurality of nut and bolt assemblies, comprising:

a. a wheel cover fastened to the wheel rim by a fastener, wherein the wheel rim is defined by a diameter, a depth, and an elliptically-shaped dome that reduces drag and creates a low pressure by a Bernoulli effect that causes

warm air generated by the vehicle in the area of the tire/wheel arrangement to be evacuated from the wheel cover through an exhaust port diameter;

b. a bridge section located over the exhaust port diameter;

c. a plurality of reflectors; and a pressure sensor arrangement disposed on the bridge section, wherein the pressure sensor arrangement includes a gauge and a valve arrangement, wherein the valve arrangement includes an intake valve and a valve and hose arrangement connected to the valve stem.

16. The tire/wheel arrangement according to claim 15, wherein the fastener is a wheel clip.

17. A wheel rim assembly including a wheel cover and a wheel rim, comprising:

a. a clip assembly for attaching a wheel cover to a wheel rim, wherein the clip assembly includes:

b. a bracket portion that affixes to the wheel cover, and

c. a base portion that affixes to the wheel rim, wherein the base portion is a planar strip that is curved to conform to an inner periphery of the wheel rim.

18. The wheel rim assembly of claim 17, wherein the bracket portion further comprises a first end and a second end.

19. The wheel rim assembly of claim 18, wherein the second end further comprises a spring clip and a fastening stud that allows attachment of the wheel clip assembly to the wheel cover.

20. The wheel rim assembly of claim 19, wherein the spring clip is permanently affixed to the second end by protrusions that extend from the second end in opposing relationship about a passage that provides clearance for the fastening stud for engagement about the spring clip.

21. The wheel rim assembly of claim 20, wherein the fastening stud is a Dzus fastener that may be twisted and fastened about the spring clip in order to draw the wheel cover adjacent to second end of the bracket portion.

22. The wheel rim assembly of claim 17, wherein the base portion comprises an adhesive about an outer side for adhering the wheel clip assembly to the inner periphery of the wheel rim.

23. The wheel rim assembly of claim 17, wherein the base portion is welded to the inner periphery of the wheel rim.

24. The wheel rim assembly of claim 17, wherein the base portion is bolted to the inner periphery of the wheel rim.

25. The wheel rim assembly of claim 17, wherein the bracket portion and the base portion comprise a rigid material.

26. The wheel rim assembly of claim 25, wherein the rigid material is stainless steel.

27. The wheel rim assembly of claim 17, wherein the bracket portion comprises a first rigid material and the base portion comprises a second rigid material.

28. The wheel rim assembly of claim 27, wherein the first rigid material is stainless steel and the second rigid material is plastic.

29. A wheel rim assembly including a wheel cover and a wheel rim, comprising:

a. a clip assembly for attaching a wheel cover to a wheel rim, wherein the clip assembly includes:

i. a bracket portion that affixes to the wheel cover, wherein the bracket portion further comprises a first end and a second end, wherein the second end further comprises a spring clip and a Dzus fastener that allows attachment of the wheel clip assembly to the wheel cover, wherein the spring clip is permanently affixed to the second end by protrusions that extend from the second end in opposing relationship about a passage that provides clearance for the Dzus fastener for engagement about the spring clip, wherein the Dzus fastener is twisted and fastened about the spring clip in order to draw the wheel cover adjacent to second end of the bracket portion, and

ii. a base portion that affixes to the wheel rim, wherein the base portion is a planar strip that is curved to conform to an inner periphery of the wheel rim, wherein the base portion comprises an adhesive about an outer side for adhering the wheel clip assembly to the inner periphery of the wheel rim.

30. The wheel rim assembly of claim 29, wherein the bracket portion and the base portion comprise a rigid material.

31. The wheel rim assembly of claim 30, wherein the rigid material is stainless steel.

32. The wheel rim assembly of claim 29, wherein the bracket portion comprises a first rigid material and the base portion comprises a second rigid material.

33. The wheel rim assembly of claim 30, wherein the first rigid material is stainless steel and the second rigid material is plastic.

34. A wheel rim assembly including a wheel cover and a wheel rim, comprising:

a. means for affixing a wheel cover to a wheel rim;

b. means for affixing to a wheel cover; and

c. means for affixing to a wheel rim.

35. The wheel rim assembly of claim 34, wherein the means for affixing a wheel cover to a wheel rim is a wheel clip assembly.

36. The wheel rim assembly of claim 34, wherein the means for affixing to a wheel cover is a bracket portion, wherein the bracket portion further comprises a first end and a second end, wherein the second end further comprises a spring clip and a Dzus fastener that allows attachment of the wheel clip assembly to the wheel cover, wherein the spring clip is permanently affixed to the second end by protrusions that extend from the second end in opposing relationship about a passage that provides clearance for the Dzus fastener for engagement about the spring clip, wherein the Dzus fastener is twisted and fastened about the spring clip in order to draw the wheel cover adjacent to second end of the bracket portion.

37. The wheel rim assembly of claim 34, wherein the means for affixing to a wheel rim is a base portion, wherein the base portion is a planar strip that is curved to conform to an inner periphery of the wheel rim, wherein the base portion comprises an adhesive about an outer side for adhering the wheel clip assembly to the inner periphery of the wheel rim.

38. A wheel clip assembly for attaching a wheel cover to a wheel rim, comprising:

a. a base portion comprising a strip curved to conform to an inner periphery of the wheel rim;

b. a bracket portion attached to the base portion; and

c. means for fastening the bracket portion to the wheel cover.

39. The wheel clip assembly of claim 38, wherein the base portion and the bracket portion are a unitary structure.

40. The wheel clip assembly of claim 38, wherein the bracket portion comprises a first end and a second end.

41. The wheel clip assembly of claim 38, wherein the means comprises a spring clip.

42. The wheel rim assembly of claim 41, wherein the spring clip is secured to the second end.

43. The wheel clip assembly of claim 41, wherein the means further comprises a fastening stud.

44. The wheel clip assembly of claim 43, wherein the fastening stud comprises a Dzus fastener.

45. The wheel clip assembly of claim 44, wherein the Dzus fastener is positioned about the spring clip to draw the wheel cover adjacent to the bracket portion.

46. The wheel clip assembly of claim 38, comprising an adhesive about an outer side of the base portion for adhering the base portion to the inner periphery of the wheel rim.

47. The wheel clip assembly of claim 38, wherein at least one of the bracket portion and the base portion comprise a rigid material.

48. The wheel clip assembly of claim 47, wherein the rigid material comprises at least one of stainless steel and plastic.

49. The wheel clip assembly of claim 38, wherein the wheel cover comprises an aerodynamic wheel cover.

50. A wheel clip assembly for attaching a wheel cover to a wheel rim, comprising:

a. a substantially rigid base portion comprising a strip curved to conform to an inner periphery of the wheel rim;

b. a substantially rigid bracket portion attached to the base portion and having a first and second end; and

c. means for fastening the bracket portion to the wheel cover, comprising:

i. a spring clip secured to the second end; and

ii. a Dzus fastener positioned about the spring clip to draw the wheel cover adjacent to the bracket portion.

51. The wheel clip assembly of claim 50, wherein the base portion and the bracket portion are a unitary structure.

52. The wheel clip assembly of claim 50, comprising an adhesive about an outer side of the base portion for adhering the base portion to the inner periphery of the wheel rim.

53. The wheel clip assembly of claim 50, wherein the rigid material comprises at least one of stainless steel and plastic.

54. The wheel clip assembly of claim 50, wherein the wheel cover comprises an aerodynamic wheel cover.

55. An aerodynamic wheel cover for attachment to an inner periphery of a wheel having a rim, comprising:

a. a dome; and

b. an exhaust port positioned at an apex of the dome;

wherein the dome is sized to be securingly attached to the wheel with the rim facing into the dome and the exhaust port being distal to the rim.

56. The aerodynamic wheel cover of claim 55 having dimensions, comprising:

a. a dome diameter equal to about 22.5 inches at a point distal the exhaust port;

b. a dome depth equal to about 6 inches; and

c. an exhaust port diameter equal to about 9 inches.

57. The aerodynamic wheel cover of claim 55, having dimensions proportionate with a dome diameter equal to about 22.5 inches at a point distal the exhaust port, a dome depth equal to about 6 inches, and an exhaust port diameter equal to about 9 inches.

58. The aerodynamic wheel cover of claim 55, comprising a bridge over the exhaust port.

59. The aerodynamic wheel cover of claim 58, comprising a pressure sensor arrangement over the exhaust port.

60. The aerodynamic wheel cover of claim 58, comprising a gauge and a valve assembly.

61. The aerodynamic wheel cover of claim 60, comprising a valve stem and a hose.

62. The aerodynamic wheel cover of claim 61, wherein the valve stem, hose, gauge and valve assembly are in pneumatic communication with each other such that, when the hose is in pneumatic communication with a tire fill-valve of a tire, the gauge displays the pressure of the tire.

63. The aerodynamic wheel cover of claim 61, wherein the valve stem, hose, gauge and valve assembly are in pneumatic communication with each other such that, when the hose is in pneumatic communication with the tire fill-valve, the tire can be at least one of inflated and deflated via the valve stem.

64. The aerodynamic wheel cover of claim 55, comprising a plurality of reflectors.

65. The aerodynamic wheel cover of claim 55, wherein the dome comprises an elliptically-shaped dome sized to divert airflow drag.

66. The aerodynamic wheel cover of claim 55, wherein the exhaust port comprises a diameter that creates a low pressure within the wheel cover when the aerodynamic wheel cover is fastened to a rotating wheel.

67. The aerodynamic wheel cover of claim 55 in combination with a wheel clip assembly.

68. The aerodynamic wheel cover of claim 55, wherein the wheel clip assembly comprises:

a. a base portion comprising a strip curved to conform to an inner periphery of the wheel rim;

b. a bracket portion attached to the base portion and having a first and second end; and

c. means for fastening the bracket portion to the aerodynamic wheel cover, comprising:

i. a spring clip secured to the second end; and

ii. a Dzus fastener positioned so as to be rotatable about the spring clip to draw the wheel cover adjacent to the bracket portion.

69. An aerodynamic wheel cover for attachment to an inner periphery of a wheel having a rim, comprising:

a. a substantially elliptically-shaped dome;

b. an exhaust port positioned at an apex of the dome and comprising a diameter that creates a low pressure within the aerodynamic wheel cover when the aerodynamic wheel cover is fastened to a rotating wheel;

c. a bridge over the exhaust port; and

d. a gauge, an intake valve, a valve assembly and a gauge, each at least one of being disposed on the bridge and being proximate the bridge, wherein the valve stem, hose, gauge and valve assembly are in pneumatic communication with each other such that, when the hose is in pneumatic communication with a tire fill-valve of the tire, the gauge displays the pressure of the tire and the tire can be at least one of inflated and deflated via the valve stem;

wherein the dome is sized to be securingly attached to the wheel with the rim facing into the dome and the exhaust port being distal to the rim.

70. The aerodynamic wheel cover of claim 68 in combination with a wheel clip assembly.

71. An aerodynamic wheel cover assembly for attachment to an inner periphery of a wheel having a rim, comprising:

a. a substantially elliptically-shaped dome, wherein the dome is sized to be securingly attached to the wheel with the rim facing into the dome;

b. an exhaust port positioned at an apex of the dome and comprising a diameter that creates a low pressure within the aerodynamic wheel cover when the aerodynamic wheel cover is fastened to a rotating wheel;

c. a bridge over the exhaust port;

d. a gauge, an intake valve, a valve assembly and a gauge, each at least one of being disposed on the bridge and being proximate the bridge, wherein the valve stem, hose, gauge and valve assembly are in pneumatic communication with each other such that, when the hose is in pneumatic communication with a tire fill-valve of the tire, the gauge displays the pressure of the tire and the tire can be at least one of inflated and deflated via the valve stem;

e. a wheel clip assembly base portion comprising a strip curved to conform to an inner periphery of the rim;

f. a wheel clip assembly bracket portion attached to the base portion and having a first and second end;

g. a spring clip secured to the second end; and

h. a Dzus fastener positioned about the spring clip and securing the aerodynamic wheel cover against the bracket portion.

72. Apparatus for sensing when pressure in a vehicle tire is below a pre-selected limit and providing a signal indicative thereof at a remote locale, comprising:

a. a transducer for detecting pressure in said tire and providing a first output signal indicative thereof;

b. a comparator for comparing said signal from said transducer to a reference signal defined by said pre-selected limit and providing a second output signal indicative of said comparison;

c. a transmitter receiving said second output signal for providing a third signal to a remote receiver, said third signal indicating pressure in said tire being below said pre-selected limit.

73. Apparatus for sensing when pressure in a vessel outside a pre-selected range and providing a signal indicative thereof at a remote locale, comprising:

a. means for detecting pressure in said vessel and providing a first output signal indicative thereof;

b. means for providing electrical energy to said pressure detecting means;

c. electrically powered means for comparing said first output signal to a reference defined by said pre-selected range and providing a second output signal indicative of said comparison;

d. transmitting means actuated by said second output signal for providing a third output signal to a remote receiver, said third output signal indicating the relationship of vessel pressure to said pre-selected range.

74. Apparatus of claim 72 wherein said pressure detecting means continuously detects pressure in said vessel.

75. Apparatus of claim 72 wherein said transducer first output signal is a first electrical output signal.

76. Apparatus of claim 72 wherein said second output signal is an electrical output signal.

77. A method for sensing when pressure in a vessel exceeds a pre-selected limit and providing a signal indicative thereof at a remote locale, comprising:

a. detecting vessel pressure and providing a first output signal which is indicative thereof;

b. comparing said first output signal to a reference and providing a second output signal when said first output signal and said reference are in a pre-selected relationship indicative of vessel pressure exceeding said pre-selected limit;

c. generating and transmitting a third output signal indicative of said vessel pressure exceeding said pre-selected limit responsively to said second output signal resulting from said comparison.

78. The method of claim 76 further comprising providing said first output signal continuously.

79. The method of claim 77 further comprising providing said first output signal as a first electrical output signal.

80. The method of claim 78 further comprising providing said first electrical output signal as a first electrical output voltage signal.

81. The method of claim 76 further comprising providing said third output signal as an electrical output signal.

82. The method of claim 76 further comprising providing said third output signal as an optical output signal.

83. Apparatus for sensing when pressure in a vehicle tire has gone outside a pre-selected limit and providing a signal indicative thereof at a remote locale, comprising:

a. a transducer for detecting pressure in said tire and providing a first output signal which is indicative thereof;

b. a battery for providing electrical energy to said transducer;

c. a comparator powered by said battery for comparing said first output signal from said transducer to a reference and providing a second output signal indicative of said comparison;

d. a relay receiving said second output signal from said comparator as input thereto and being energized thereby;

e. a transmitter, operating responsively to actuation of said relay by said second output signal from said comparator, for providing a third output signal to a remote receiver, said third output signal provided by said transmitter indicating pressure in said tire being at a pre-selected level less than said reference.

84. Apparatus of claim 82 wherein said transducer continuously detects pressure in said tire.

85. Apparatus of claim 83 wherein said transducer first output signal is a first electrical output signal.

86. Apparatus of claim 84 wherein said first electrical output signal is an electrical voltage signal.

87. Apparatus of claim 85 wherein said comparator second output signal is an electrical output signal.

88. Apparatus of claim 86 wherein said comparator second output signal is a second electrical voltage output signal.

89. A method for sensing when pressure in a vehicle tire exceeds a pre-selected limit and providing a signal indicative thereof at a remote locale, comprising:

a. detecting tire pressure and providing a first output signal indicative thereof;

b. comparing said first output signal to a reference and providing a second output signal when said first output signal and said reference are in a pre-selected relationship indicative of tire pressure exceeding said pre-selected limit;

c. generating and transmitting to a remote locale a third output signal indicative of said tire pressure exceeding said pre-selected limit responsively to said second output signal from said comparator.

90. The method of claim 88 wherein said detecting pressure in said tire is performed continuously.

91. The method of claim 88 wherein said first output signal provided upon detection of said tire pressure is a first electrical output signal.

92. The method of claim 90 wherein said first electrical output signal provided upon detecting tire pressure is a first electrical output voltage signal.

93. The method of claim 88 wherein said second output signal is a second electrical output signal.

94. The method of claim 92 wherein said second electrical output signal is a second electrical output voltage signal.

95. The method of claim 88 wherein said third output signal is a third electrical output signal.

96. The method of claim 94 wherein said third electrical output signal is a third electrical output voltage signal.

97. The method of claim 95 wherein said third electrical output voltage signal is an analog signal.

98. The method of claim 95 wherein said third electrical output voltage signal is a digital signal.

99. The method of claim 88 wherein said third output signal is a digital output signal.

100. The method of claim 88 wherein said third output signal is a optical signal in the visible or infrared range.

101. A multi-wheeled highway vehicle for transporting passengers, cargo or both, comprising:

a. plurality of wheels supporting said vehicle, said wheels having pneumatic tires mounted thereon;

b. a transducer connected to one of said wheels for sensing pressure in a tire mounted on said wheel and providing an output signal indicative thereof;

c. a comparator mounted on said wheel, receiving said output signal, for comparing said output signal from said transducer to a reference and providing an second output signal indicative of said comparison;

d. a transmitter carried by said vehicle, receiving said second output signal produced by said comparator, for sending tire pressure information in said second output signal to a remote locale, optionally together with information identifying said vehicle, and/or the location of said vehicle and/or the speed and/or direction of travel thereof.

102. The highway vehicle of claim 101 further comprising:

a. a plurality of transducers, connected to respective ones of said wheels, for sensing pressure in individual tires mounted on respective ones of said wheels;

b. a plurality of comparators receiving output signals provided by said transducers mounted on respective ones of said wheels, for comparing said output signals provided by respective ones of said transducers to a reference and providing second output signals indicative of said comparisons;

wherein said transmitter receives said second output signals provided by respective ones of said comparators which are indicative of said comparisons and sends third output signals including tire pressure information to a remote locale.

103. The highway vehicle of claim 102 further comprising at least one multiplexer carried by said vehicle, receiving said output signals provided by said comparators and providing said comparator output signals to said transmitter.

104. The highway vehicle of claim 103 further comprising memory means for storing the output signals provided by said comparators prior to transmission of said signals by said transmitter to said remote locale.

105. The highway vehicle of claim 102 wherein said comparators compare signals provided by said transducers to reference values indicative of acceptable pressure in said pneumatic tires.

106. The highway vehicle of claim 102 wherein said comparators of said plurality are mounted on respective rotatably coupled pairs of said wheels.

107. The highway vehicle of claim 102 wherein said comparators provide serial output signals indicative of said comparison.

108. Apparatus for sensing when pressure in a tire is outside of a pre-selected acceptable range and providing a signal indicative thereof at a remote locale, comprising:

a. a multi-wheeled highway vehicle for transporting passengers, cargo or both, comprising:

i. a plurality of wheels supporting said vehicle, said wheels having pneumatic tires mounted thereon;

ii. means connected to respective ones of said tires for sensing pressure in individual tires mounted on respective ones of said wheels and providing first output signal indicative of said sensed pressure;

iii. means, receiving said first output signal indicative of said pressure of said tires mounted on said wheels, for comparing said first

pressure indicative signal to at least one reference and providing second output signal for respective ones of said first output pressure signal, indicative of said comparison;

iv. means, carried by said vehicle, for receiving said second output signals and formatting said second output signals into digital format for transmission by a transmitter;

v. said transmitter being carried by said vehicle and transmitting said signals received in digital form to a remote locale optionally together with information identifying said vehicle, location, speed, driver and distance of vehicle travel;

b. a satellite receiving said signals from said transmitter and relaying said signals to a ground station;

c. said ground station receiving said signals and providing the same in readable format to persons interested in the data carried thereby.

109. A method for sensing when pressure in any one of the tires of a multi-wheel highway vehicle is outside of a pre-selected acceptable range and providing a signal indicative thereof at a remote locale, comprising:

a. monitoring pressure in each of the tires of said multi-wheel vehicle with transducers connected to said wheels on which said tires are mounted with said transducers providing output signals indicative of pressure in said tire which with said transducer is associated;

b. comparing output signals provided by said transducers to a reference and providing a second output signal when any of said transducer-provided

first output signals relative to said reference are in a pre-selected relationship indicative of pressure of a tire associated with said respective transducer being outside of said pre-selected acceptable range;

c. generating and transmitting a third output signal, indicative of said comparisons and whether said tire pressures are within said pre-selected acceptable range or outside of the same, to a remote locale, optionally with information identifying said vehicle, and/or the location of said vehicle and/or the speed and/or the direction of travel thereof and/or the driver of said vehicle.

110. The method of claim 109 further comprising transmitting said third signal to a relay satellite and therefrom relaying said third signal to a ground station.

111. The method of claim 109 further comprising transmitting said third signal to an elevated relay position and therefrom relaying said third signal to a ground station.

112. An integrated monolithic circuit chip adapted for mounting on a wheel of a multi-wheeled highway vehicle for transporting passengers, cargo or both, said chip comprising:

a. a transducer connected to one of said wheels for sensing pressure in a tire mounted on said wheel and providing an output signal indicative thereof;

b. a comparator, receiving said output signal, for comparing said output signal from said transducer to a reference and providing an second output signal indicative of said comparison; and

c. a transmitter, receiving said second output signal produced by said comparator, for sending tire pressure information in said second output signal to locale removed from said chip.

113. An integrated solid state monolithic chip for sensing when pressure in a vehicle tire or other pressure vessel is outside of a pre-selected acceptable range and providing a signal indicative thereof at a remote locale, mountable on a rim of a wheel of a vehicle on which said tire is mounted or on a pressure vessel, comprising:

a. means connected to a tire or other pressure vessel for sensing pressure therein and providing a signal indicative of said sensed pressure;

b. means, receiving said signal indicative of said pressure, for comparing said signal to at least one reference and providing second signal indicative of said comparison;

c. means receiving said second output signal for transmitting same to a locale removed from said chip.

114. A multi-wheeled highway vehicle for transporting passengers, cargo or both, comprising:

a. plurality of wheels supporting said vehicle, said wheels having pneumatic tires mounted thereon;

b. a transducer connected to one of said wheels for sensing pressure in a tire mounted on said wheel and providing an output signal indicative thereof;

c. a comparator mounted on said wheel, receiving said output signal, for comparing said output signal from said transducer to a reference and providing an second output signal indicative of said comparison;

d. a transmitter carried by said vehicle, receiving said second output signal produced by said comparator, for sending tire pressure information in said second output signal to a remote locale, optionally together with information identifying said vehicle, and/or the location of said vehicle and/or the speed and/or direction of travel thereof;

e. an aerodynamic wheel cover assembly attached to the inner periphery of said wheel having said transducer connected thereto, said wheel cover assembly comprising:

i. a substantially elliptically-shaped dome sized to be securely attached to the wheel with the rim facing into a concave side of said dome;

ii. an exhaust port positioned at an apex of the dome, having diameter creating low pressure within the wheel cover when the wheel cover is fastened to said wheel and said wheel is rotating;

iii. a bridge over the exhaust port;

iv. a mechanical pressure gauge, an intake valve, a valve stem, a valve assembly and a gauge, at least one of which being disposed on said bridge and remaining ones being proximate said bridge, wherein the valve stem, hose, gauge and valve assembly are in pneumatic communication such that when the hose is in pneumatic

communication with a fill-valve of the tire, the gauge displays pressure of the tire and the tire can be inflated and deflated via the valve stem;

v. a wheel clip assembly base portion comprising a strip curved to conform to an inner periphery of the rim;

vi. a wheel clip assembly bracket portion attached to the base portion and having a first and second end;

vii. a spring clip secured to the second end; and

viii. a Dzus fastener positioned about the spring clip and securing the aerodynamic wheel cover against the bracket portion.